(एईआरबी) द्वारा निर्धारित मात्रा की सीमाओं के भीतर ही हैं। नाभिकीय संस्थापनाओं से निकलने वाली विकिरण सक्रियता की मात्रा का मानीटरन यह सुनिश्चित करने के लिए किया जाता है कि ये परमाणु ऊर्जा नियामक बोर्ड द्वारा निर्धारित सीमाओं के भीतर हैं।

नाभिकीय संस्थापनाओं के बाहर अवस्थित पर्यावरणीय सर्वेक्षण प्रयोगशालाएं वायु, जल, खाद्य-पदार्थों और तलछटों के नमूने एकत्रित करती हैं और संवेदनशील विधियों का उपयोग करके उनमें विद्यमान रेडियोन्यूक्लाइडों की सांद्रता को मापती हैं। आम जनता के लोगों पर पड़ने वाले प्रभाव की मात्रा का मूल्यांकन नियमित रूप से किया जाता है। उन पर पड़ने वाले प्रभाव की मात्रा, परमाणु ऊर्जा नियामक बोर्ड द्वारा आम जनता के लोगों पर पड़ने वाले प्रभाव की निर्धारित मात्रा का एक छोटा-सा अंश है।

परमाणु ऊर्जा नियामक बोर्ड द्वारा की गई व्यवस्थित समीक्षा से इस बात की पुष्टि हो गई है कि जो उपाय काम में लाए जा रहे है, वे कार्मिकों और जनता के लोगों पर पड़ने वाले विकिरण के प्रभाव को नियंत्रित करने के लिए पर्याप्त हैं। इसके परिणामस्वरूप वे उसके दुष्प्रभावों से पीड़ित नहीं होंगे।

Contribution of Atomic Energy

2517. *SHRI RAJNATH SINGH SURYA:* Will the PRIME MINISTER be pleased to state:

(a) what percentage of our total energy needs is met by the atomic energy;

(b) what is the target fixed in this regard;

(c) what has been proposed to fill the gap between the two; and

(d) what are the reasons for the gap between supply and the target?

THE MINISTER OF STATE IN THE MINISTRY OF EXTERNAL AFFAIRS (SHRIMATI VASUNDHARA RAJE): (a) Contribution of nuclear power in the total electricity generation from all the sources in the country during the year 1998 was 2.59%.

(b) A target of 6660 MWe from nuclear power has been fixed for the 9th Five Year Plan.

(c) The gap of 4820 MWe in the nuclear power sector between the existing capacity of 1840 MWe and the proposed target of 6660 MWe is planned to be filled up as follows:

Details of Programme		Capacity (MWe)
1.	Reactors under construction (Kaiga 1&2 and RAPP 3&4 - Pressurised Heavy Water Reactors of 220 MWe each)	880
2.	Reactors sanctioned and work has commenced. (TAPP 3&4 - Pressurised Heavy Water Reactors of 500 MWe each	1000
3.	Additional Reactors proposed during 9th plan (Kaiga 3&4 - PHWRs of 220 MWe each, Kudankulam 1&2 - Light Water Reactors of 1000 MWe each and 1 PFBR of 500 MWe.	2940

(d) The main reasons for this gap is due to the slowing down of implementation of the Nuclear Power Programme due to financial crunch.

Setting up of Nuclear Power Project in Vietnam with India's Help

2518. SHRI K.M. SAIFULLAH:
SHRI SOLIPETA RAMACHANDRA REDDY:

Will the PRIME MINISTER be pleased to state: (a) whether India proposed to help Vietnam to set up a nuclear power project;

(b) if so, the details thereof;

(c) the benefit in exchange India is likely to get out of the cooperation; and

(d) the details of other bilateral exchange with that country?

THE MINISTER OF STATE IN THE MINISTRY OF EXTERNAL AFFAIRS (SHRIMATI VASUNDHARA RAJE): (a) to (d) Dr. R. Chidambaram, Chairman, Atomic Energy Commission (AEC) and Secretary, Department of Atomic Energy (DAE) visited Vietnam in January 1999. During the visit, a detailed co-operation plan for 1999 was signed between the AEC and the Vietnam Atomic Energy Commission (VAEC). The co-operation plan is under the framework of the 1986 bilateral agreement between India and Vietnam for co-operation for the utilisation of atomic energy for peaceful purposes. The co-operation plan, *interalia*, envisages AEC assistance to VAEC in (i) training manpower in the field of

nuclear power (ii) assistance in setting up of a training centre in Vietnam (iii) exchange of scientists (iv) setting up of a semi-pilot plant for manufacture, controlling and assessing the quality of U02 ceramic (v) co-operation in exploration of uranium ore mines in Vietnam and (vi) Visit of VAEC delegation in early 2000 to India.

Upgrading and Modification of ECCS

2519. SHRI DIPANKAR MUKHERJEE: SHRI NILOTPAL BASU:

Will the PRIME MINISTER be pleased to state:

(a) whether a 1979 or/and 1987 safety assessment report prepared by the Department of Atomic Energy (DAE) had called for urgent upgrading and modification of the Emergency Core Cooling System (ECCS) in the Madras Atomic Power Station (MAPS) Units -1&2.

(b) if so, whether this modification has been carried on MAPS-1&2 so far; and

(c) if not, whether MAPS-1&2 are being run at serious risk to public safety without this modification, and what are the plans of Government to immediately rectify this situation?

THE MINISTER OF STATE IN THE MINISTRY OF EXTERNAL AFFAIRS (SHRIMATI VASUNDHARA RAJE): (a) Yes, Sir. DAE has carried out safety assessments of its units through specially appointed committees. While noting that the Emergency Core Cooling System (ECCS), found to be adequate during design of the plant, already exists, the assessment has suggested the desirability of upgrading the ECCS at Rajasthan Atomic Power Station (RAPS) and Madras Atomic Power Station (MAPS).

(b) Upgradation of the existing system arising ouf of the evolving safety criteria are generally carried out during periods of long shut down. This is an internationally accepted practice. The required upgradation has since been carried out in RAPS

Unit-2 during the major shutdown that was taken during 1995-98 for en-masse replacement of coolant channels. A similar approach has been proposed with respect to MAPS, i.e. for upgradation of the ECCS to be implemented during a long shut down that would be necessary when MAPS will undergo en-masse coolant channel replacement.

(c) No, Sir. The existing ECCS is designed to provide adequate safety if an unlikely event were to demand its actuation.

Safety of Nuclear Establishments

2520. SHRI ANANTA SETHI: Will the PRIME MINISTER be pleased to state:

(a) whether Government have reviewed the safety aspect of various nuclear establishments in the country;

(b) if so, the plant-wise steps taken thereon; and

(c) the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF EXTERNAL AFFAIRS (SHRIMATI VASUNDHARA RAJE): (a) Yes, Sir. The Atomic Energy Regulatory Board (AERB) is an independent regulatory body meant for review and regulation of safety aspects of all the nuclear establishments in the country.

(b) and (c) The review of safety aspects of all nuclear establishments in the country is a continuous process. For this purpose, a three tier safety review process is adopted under the overall control of the AERB. Firstly, each plant has a Unit Safety Committee which looks into every safety related event/aspect by means of carrying out periodic safety review and regulatory inspections at the various nuclear establishments/plants. Secondly, the reports thereof and the issues of higher safety significance are reviewed/examined by the Safety Review Committee for Operating Plants (SARCOP) of AERB. The third tier in this review process is the AERB itself. The recommendations made by the Safety Committee i.e. SARCOP and AERB are binding on all nuclear establishments in the country and are implemented in a time-bound manner.

Setting up of Nuclear Safety Research Institute

2521. SHRI ABANI ROY: Will the PRIME MINISTER be pleased to state:

(a) whether the Government has recently